

LISTING OF THE CLAIMS

Claims 1-47 (canceled)

Claim 48 (currently amended) A method for processing data in a database contained in a storage medium, comprising the steps of:

collecting a plurality of samples;

separating each sample into proteins and/or polypeptides to provide discrimination and resolution of the proteins and/or polypeptides using one technique selected from the following techniques: chromatography; immunoelectrophoresis, mass spectrometry or electrophoresis;

[(a)] storing in the database data that includes at least one pattern representing the separated proteins and/or polypeptides, the data based upon a statistically significant number of samples, the data including at least one parameter of each sample;

[(b)] comparing unknown data with the data stored in the database;

[(c)] recording differences and similarities.

Claim 49 (canceled)

Claim 50 (previously presented) The method of claim 48, wherein the parameter is one selected from the group consisting of: molecular weight and isoelectric point.

Claim 51 (previously presented) The method of claim 48, wherein parameter is data output from a mass spectrometry analysis.

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Claim 52-70 (canceled)

Claim 71 (previously presented) The method of claim 48, wherein the samples are selected from one of the group consisting of serum, organ, tissues, cells, organelles and fractions.

Claim 72 (previously presented) The method of claim 48, wherein the differences and similarities in the database indicate one of the following states: aging, disease, presence of a toxin and presence of a pathogen.

Claim 73 (previously presented) The method of claim 48, wherein a state is classified, the state selected from the group consisting of: a disease state, the presence of a toxin, the presence of a pathogen and aging.

Claim 74 (previously presented) The method of claim 48, further comprising the step of:

classifying a state of a sample by the steps of:

- a. detecting a pattern in the sample;
- b. comparing the pattern in the sample with the stored patterns in the database to identify differences and similarities; and
- c. using the identified differences and similarities to confirm the state thereof.

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Claim 75 (previously presented) The method of claim 74, wherein the state is selected from the group consisting of: a disease state, the presence of a toxin, the presence of a pathogen and aging.

Claim 76 (previously presented) The method of claim 48 or 73, wherein the pattern is a discriminatory pattern.